UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,285	01/30/2004	Zhichen Xu	200401879-1	4289

22879   7590   10/06/2008
HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER
HAMZA, FARUK

ART UNIT	PAPER NUMBER
2155	

NOTIFICATION DATE	DELIVERY MODE
10/06/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
ipa.mail@hp.com

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) *18-20 and 24-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17 and 21-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *1/30/04, 9/19/05*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Applicant's election with traverse of species I (1-17 and 21-23) in the reply

filed on August 21, 2008 is acknowledged. The traversal is on the ground(s) that

in order to examine all the claims do not require serious search burden. This is

not found persuasive. In this instant application, 3 different patentably distinct

species are claimed. It is irrelevant where the application is classified by the

office. Applicant is allowed to claim only one invention per application. The

applicant is requested to cancel the unelected claims. Claims 1-26 are pending.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

2.   Claims 21-23 are rejected under 101 because evident by the applicant's

specification P[0086] computer readable medium is not limited to tangible

medium.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

3.   Claims 1-17 and 21-23 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly

claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the candidate nodes" in line 4. There is insufficient antecedent basis for this limitation in the claim.

The term "approximately" in claim 4 is a relative term which renders the claim indefinite. The term "approximately" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It rendered the location information indefinite.

Claim 14 recites the limitation "the candidate nodes" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 21 recites the limitation "the candidate nodes" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-2, 7-17 and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Andrews et al. (U.S. Patent Number 7,020,698) hereinafter referred as Andrews.

Andrews teaches the invention as claimed including a system and method for locating a closest server in response to a client request via an interactive distribution network such as the Internet (see abstract).

As to claim 1, Andrews teaches a method of identifying at least one node close to a first node in a network, the method comprising:

selecting a set of candidate nodes from a plurality of nodes based on location information for the candidate nodes and the first node (abstract, Column 4, lines 8-Column 5, lines 18, Andrews discloses selecting closest content server based on distance from group of content server);

applying a clustering algorithm to the location information for the candidate nodes and the first node (Column 12, 10-28, Andrews discloses using clustering algorithm); and

identifying a subset of the set of candidate nodes closest to the first node based on results of applying the clustering algorithm (Column 16, lines 22-38, Andrews discloses identifying content server from by using output of clustering algorithm).

As to claim 2, Andrews teaches the method of claim 1, wherein selecting a set of candidate nodes comprises:

comparing location information for the plurality of nodes to the location information for the first node to select the set of candidate nodes from the plurality of nodes closest to the first node (Column 4, lines 8-Column 5, lines 18).

As to claim 10, Andrews teaches the method of claim 1, further comprising:

determining distances to each of the subset of candidate nodes from the first node (Column 4, lines 8-Column 5, lines 18, Column 9, lines 34-Column 10, lines 63); and

selecting a closest node to the first node from the subset of candidate nodes based on the determined distances (Column 4, lines 8-Column 5, lines 18, Column 9, lines 34-Column 10, lines 63).

As to claim 11, Andrews teaches the method of claim 1, further comprising:

selecting a node from the subset of nodes based on at least one of distances to each of the subset of candidate nodes from the first node and quality of service characteristics associated with the subset of nodes (Column 4, lines 8-Column 5, lines 18).

As to claim 12, Andrews teaches the method of claim 1, wherein the clustering algorithm is an algorithm operable to identify similarities between the location information for the first node and the candidate nodes (Column 12, lines 10-28).

As to claim 13, Andrews teaches the method of claim 12, wherein the clustering algorithm comprises at least one a min_sum, max_diff, order, inner product algorithm, k-means, principal component analysis, and latent semantic indexing (Column 12, lines 10-28).

As to claim 14, Andrews teaches a node in a network comprising:

means for selecting a set of candidate nodes from a plurality of nodes based on location information for the candidate nodes and a first node (abstract, Column 4, lines 8-Column 5, lines 18, Andrews discloses selecting closest content server based on distance from group of content server);

means for applying a clustering algorithm to the location information for the candidate nodes and the first node (Column 12, 10-28, Andrews discloses using clustering algorithm); and

means for identifying a subset of the set of candidate nodes closest to the first node based on the results of applying the clustering algorithm (Column 16, lines 22-38, Andrews discloses identifying content server from by using output of clustering algorithm).

As to claim 15, Andrews teaches the node of claim 14, further comprising:

means for receiving the location information for the plurality of nodes and the first node (abstract, Column 4, lines 8-Column 5, lines 18); and

means for storing the location information for the plurality of nodes and the first node (Column 4, lines 8-Column 5, lines 18).

As to claim 16, Andrews teaches the node of claim 15, further comprising:

means for retrieving the location information for the plurality of nodes and the first node from the means for storing (Column 9, lines 9-60); and

means for comparing the location information for the plurality of nodes and the first node to select the candidate nodes (Column 9, lines 9-60).

As to claim 17, Andrews teaches the node of claim 14, further comprising means for transmitting a list of the subset of candidate nodes to the first node (Column 10, lines 64-Column 11, lines 28).

As to claim 21, Andres teaches computer software embedded on a computer readable medium, the computer software comprising instructions performing:

selecting a set of candidate nodes from a plurality of nodes based on location information for the candidate nodes and a first node (abstract, Column 4, lines 8-Column 5, lines 18, Andrews discloses selecting closest content server based on distance from group of content server);

applying a clustering algorithm to the location information for the candidate nodes and the first node (Column 12, 10-28, Andrews discloses using clustering algorithm); and

identifying a subset of the set of candidate nodes closest to the first node based on the results of applying the clustering algorithm (Column 16, lines 22-38, Andrews discloses identifying content server from by using output of clustering algorithm).

As to claim 22, Andrews teaches the computer software of claim 21, wherein instructions performing selecting a set of candidate nodes comprises:

comparing location information for the plurality of nodes to the location information for the first node to select the set of candidate nodes physically close to the first node (Column 4, lines 8-Column 5, lines 18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 3-9 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andrews as applied above, and further in view of Harvey et al. (U. S. Pub No. 2004/0054807) hereinafter referred as Harvey.

Andrews teaches the invention substantially as claimed including a system and method for locating a closest server in response to a client request via an interactive distribution network such as the Internet (see abstract).

As to claim 3, Andrews teaches the method of claim 2.

Andrews does not explicitly teach the claim limitation of distributed hash table overlay network and storing location information in the distributed hash table overlay network.

However, Harvey teaches the claim limitation of distributed hash table overlay network and storing location information in the distributed hash table overlay network (abstract, P[0005]).

It would have been obvious to the ordinary skill in the art at time of the invention to modify Andrews by adding distributed hash table overlay network, which would allow gathering of data from nodes and dissemination of information

to its participants. One would be motivated to do such to enhance system's performance.

As to claim 4, Harvey teaches the method of claim 3, further comprising: the first node hashing the location information for the first node to identify a location in the distributed hash table overlay network to store the location information for the first node, wherein the node in the distributed hash table overlay network is approximately at the identified location (abstract, P[0005]).

As to claim 5, Harvey teaches the method of claim 3, further comprising:

receiving the location information for the plurality of nodes at the node in the distributed hash table overlay network (abstract, P[0005]); and

storing the received location information for the plurality of nodes at the node in the distributed hash table overlay network (abstract, P[0005]).

As to claim 6, Harvey teaches the method of claim 5, further comprising:

retrieving the location information for the plurality of nodes and the first node from stored location information at the node in the distributed hash table overlay network (abstract, P[0005]); and

comparing the retrieved location information to select the set of candidate nodes proximally located to the first node from the plurality of nodes (abstract, P[0005]).

As to claim 7, Andrews teaches the method of claim 1.

Andrew does not explicitly teach the claim limitation of landmark vectors for each of the first node and the plurality of nodes, the landmark vectors for each

of the first node and the plurality of nodes including distances measured to a

plurality of global landmark nodes and at least one local landmark node

proximally located to a respective one of the first node and the plurality of nodes.

However, Harvey teaches the claimed limitation of landmark vectors for

each of the first node and the plurality of nodes, the landmark vectors for each of

the first node and the plurality of nodes including distances measured to a

plurality of global landmark nodes and at least one local landmark node

proximally located to a respective one of the first node and the plurality of nodes

(abstract, P[0007,0082]).

It would have been obvious to the ordinary skill in the art at time of the

invention to modify Andrews by adding functionality for determining landmark

measurements, which would provide connection between nodes with higher

performance and/or minimize cost. One would be motivated to do such to

enhance system's performance.

As to claim 8, Harvey teaches the method of claim 7, wherein comparing

location information for the plurality of nodes to the location information for the

first node comprises:

comparing global landmark vector portions of the landmark vectors for the

first node and the plurality of nodes (abstract, P[0007,0082]); and

selecting candidate nodes from the plurality of nodes having landmark

vectors with a predetermined similarity to the landmark vector for the first node

(abstract, P[0007,0082]).

As to claim 9, Harvey teaches the method of claim 7, wherein the at least one local landmark node proximally located to a respective one of the first node and the plurality of nodes is one of on a routing path between the respective node and one of the plurality of global landmark nodes and within a predetermined distance to the respective node (abstract, P[0073]).

As to claim 23, Andrews teaches the computer software of claim 21.

Andrews does not explicitly teach the claim limitation of the location information for the first node and the plurality of nodes comprises distances measured from each of the first node and the plurality of nodes to a plurality of global landmark nodes and to at least one local landmark node proximally located to a respective one of the first node and the plurality of nodes.

However, Harvey teaches the claim limitation of the location information for the first node and the plurality of nodes comprises distances measured from each of the first node and the plurality of nodes to a plurality of global landmark nodes and to at least one local landmark node proximally located to a respective one of the first node and the plurality of nodes (P[0073,0079]).

It would have been obvious to the ordinary skill in the art at time of the invention to modify Andrews by adding functionality for determining landmark measurements, which would provide connection between nodes with higher performance and/or minimize cost. One would be motivated to do such to enhance system's performance.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

- Jain et al. (U.S. Patent Number 6,795,858) discloses method for metric

  based server selection.

- Mangipudi et al. (U.S. Patent Number 6,728, 748) discloses method for

  policy based class of service and service level management.

- Zeng et al. (U.S. Patent Number 7,305,389) discloses content propagation

  for enhanced document retrieval.

- Padmanabhan et al. (U.S. Patent Number 7,296,088) discloses method

  for determining geographic location of internet host.

- Caid et al. (U.S. Patent Number 7,251,637) discloses context vector

  generation and retrieval.

- Deshpande (U.S. Patent Number 7,191,246) discloses method for a data

  selection rate.

7.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Faruk Hamza whose telephone number is

571-272-7969. The examiner can normally be reached on Monday through

Friday.

        If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Saleh Najjar can be reached at 571-272-4006. The fax

phone number for the organization where this application or proceeding is

assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll –free).

Faruk Hamza

Patent Examiner

Group Art Unite 2155

/saleh najjar/

Supervisory Patent Examiner, Art Unit 2155